DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013781 Address: 333 Burma Road **Date Inspected:** 05-May-2010

City: Oakland, CA 94607

OSM Arrival Time: 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: CWI Present: Yes Li Yang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

34-0006 **Bridge No: Component:** Trial Assembly

Summary of Items Observed:

On this day Caltrans OSM Quality Assurance (QA) Inspector Christopher D'souza was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed and/or found the following:

Trial Assembly

8AE – 8BE Side Plate Cross Beam side

This QA Inspector observed ZPMC welding personals identified as 048699 performing repair welding by Shielded Metal Arc welding process (SMAW) on OBE8B – 002, ZPMC QC is identified as Wang Li Yang. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 1G (1F) – FCM – Repair 1 and CWR 1450

8BE – 8CE Bottom Plate

This QA Inspector observed ZPMC welding personals identified as 054467 performing repair welding by Shielded Metal Arc welding process (SMAW) on OBE8C – 003, ZPMC QC is identified as Wang Li Yang. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 1G (1F) – FCM – Repair 1 and WR - 12792

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7DW – 7EW Side plate CB side

This QA Inspector observed ZPMC welding personals identified as 037723 performing Shielded Metal Arc welding (SMAW) on $SP721 - 001 - 043 \sim 048$

This QA Inspector observed ZPMC welding personals identified as 037748 performing Shielded Metal Arc welding (SMAW) on $SP483 - 001 - 050 \sim 056$

This QA Inspector observed ZPMC welding personals identified as 067609 performing Shielded Metal Arc welding (SMAW) on $SP443 - 001 - 011 \sim 020$

ZPMC QC is identified as Zhang Hai Tao. The welding variables recorded by QC appeared to comply with the WPS - B - P 2214 - B - U2 - FCM - 1 and WPS - B - P - 2112 - FCM - 1

ABF Inspection Request number 05042010-2

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of OBG components previously accepted by ZPMC ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3 and Detection of Transverse Planar Discontinuities with Significant Flaw Height Dimension Procedure. The QA Inspector observed rejectable indications at the time of testing. Weld identification numbers were

```
OBE7A – 008, 009 (7DE – 7EE DP Transverse splice)
OBE7C – 008 (7DE – 7EE BP Transverse splice)
OBE7C – 009 (7DE – 7EE SP BK side)
OBE7C - 007 (7DE - 7EE SP CB side)
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This QA Inspector performed conventional UT (Ultrasonic Testing) in conjunction with ABF UT department for detection of planar transverse indication

See Caltrans Ultrasonic Transverse Indication Evaluation sheet dated May 5th, 2010 for further information on inspection.

ZPMC NWIT 005670

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of OBG components previously accepted by ZPMC ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QA Inspector observed no rejectable indications at the time of testing. Weld identification numbers were

```
SEG033C - 001, 011
SEG033B - 004,018
SEG035B - 006, 043
SEG035C - 043
```

This QA Inspector was involved in PAUT (Phased Array Ultrasonic Testing) training for detection of cracked

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tacks in Deck Panels as per the following procedure "UT 04-0120F4 PJP Rib Weld Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds"

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Dsouza, Christopher	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer